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GTHA FARE INTEGRATION

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Chief Planning Officer

Metrolinx Board of Directors Meeting

February 10, 2016

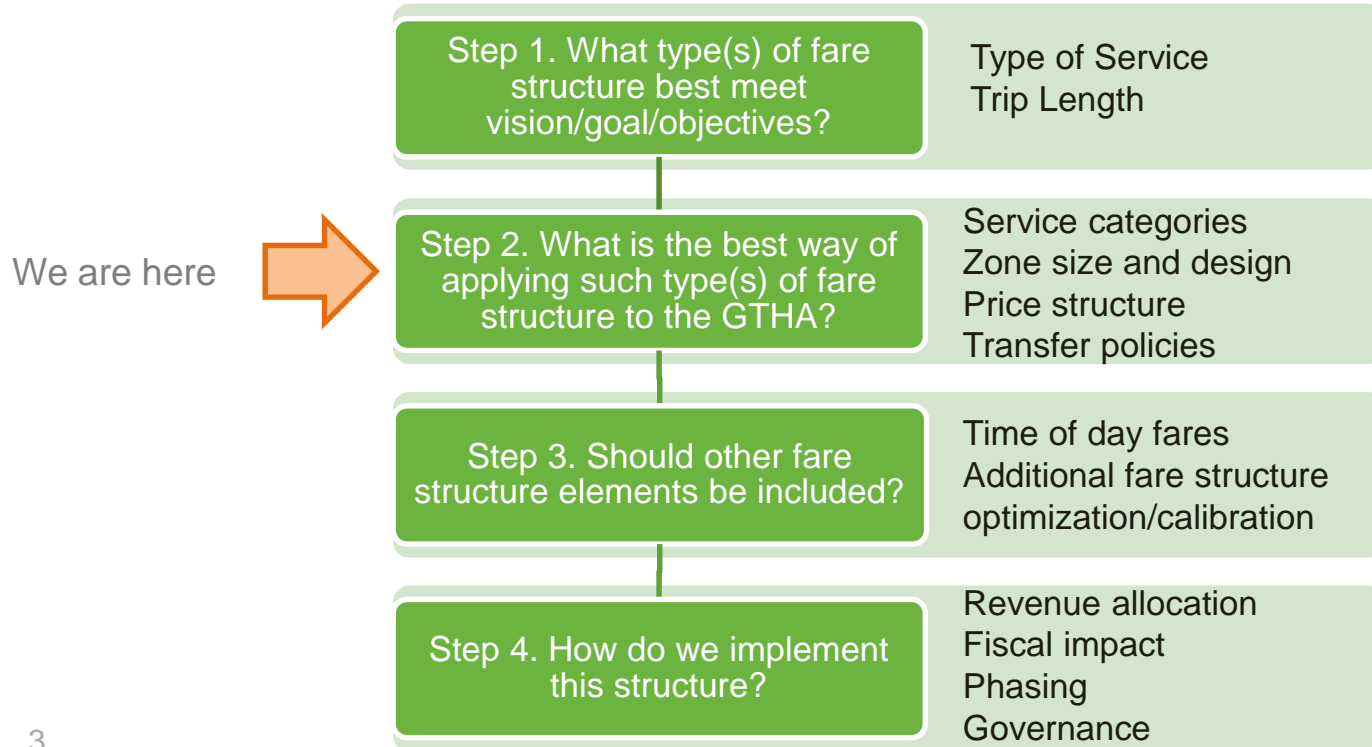
Progress Update

- The September board report on Regional Fare Policy presented various fare structures and identified those for further study
- Analysis of GTHA transit ridership and review of best practices has resulted in five design principles that inform fare structure development
- This report presents three ‘fare structure concepts’, reflecting those principles, to be further refined and evaluated
- There has been active municipal transit agency involvement in the development of these fare structure concepts
- Initial recommendations on GTHA Fare Integration will be reported at the June 2016 Board meeting












Staff are seeking the Board’s input on the three fare structure concepts for consultation and evaluation.

Fare Structure Development



Recap: Step 1 Summary Findings

- Uniform fares for all service types do not reflect the value of service to the customer and were removed from further consideration
- Travel Time based fares are variable and unpredictable and are not being investigated further
- Region-wide flat fares do not reflect value of longer trips and are being considered for Local services only
- Measured distance-based fares for Local services are complex to apply and have marginal benefits
- Zone-based and Hybrid fare structure types were retained for more detailed investigation

		Consideration of Trip Length				
		Region-wide Flat	Zones	Measured Distance	Travel Time	Hybrid
Consideration of Service Type	Uniform fare for all service types					N/A
	Multiple service categories	 Local only		 Hi-order only		

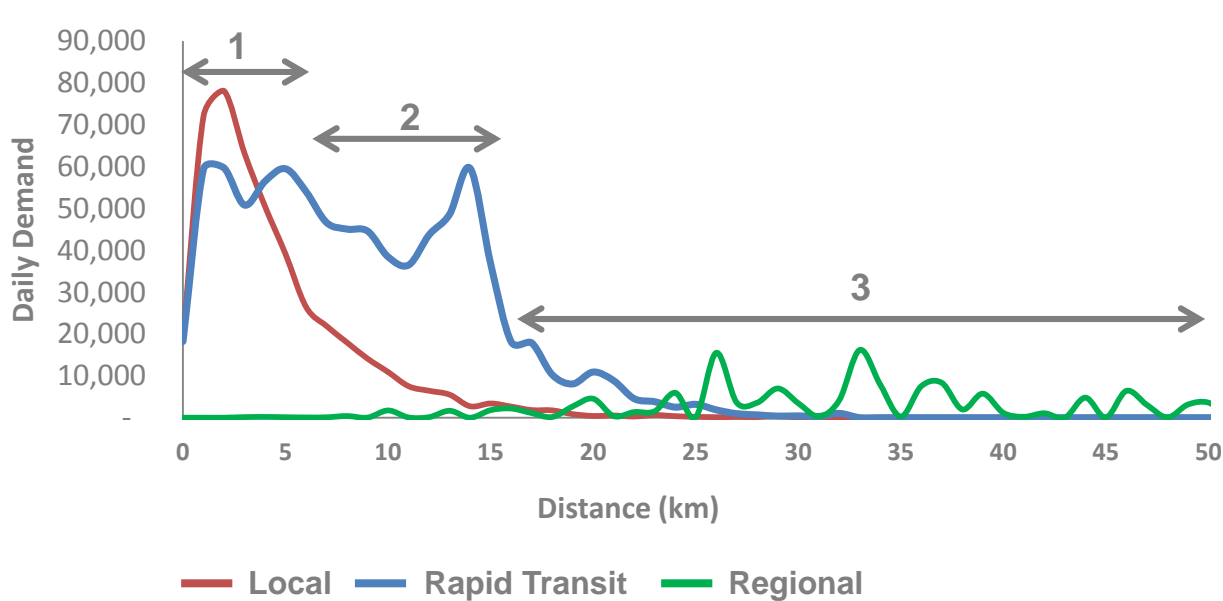
Defining Service Types

- 3 Service Types (Local, Rapid Transit, Regional) were defined using parameters that reflect qualities that customers value in transit services (ie. speed and travel time consistency)

Service Type	Examples	Stop spacing	Route Length	Average speed	Right of way
Local Transit	<ul style="list-style-type: none">• Conventional Bus• Streetcar	<750 m	<20 km	Low 10-20 km/h	<ul style="list-style-type: none">• Generally in mixed traffic; some sections of separation
Rapid Transit	<ul style="list-style-type: none">• Light Rail Transit (LRT)• Subway	500 m – 2.5 km	<25 km	Medium 20-45 km/h	<ul style="list-style-type: none">• >90% Separate
Regional Transit	<ul style="list-style-type: none">• GO Train• Highway coach	>2 km	>20 km	High >45 km/h	<ul style="list-style-type: none">• Separate (rail)• In mixed traffic (highway bus)

Service Types: Relation to Markets

- Service types serve different markets as revealed by data on demand by trip distance

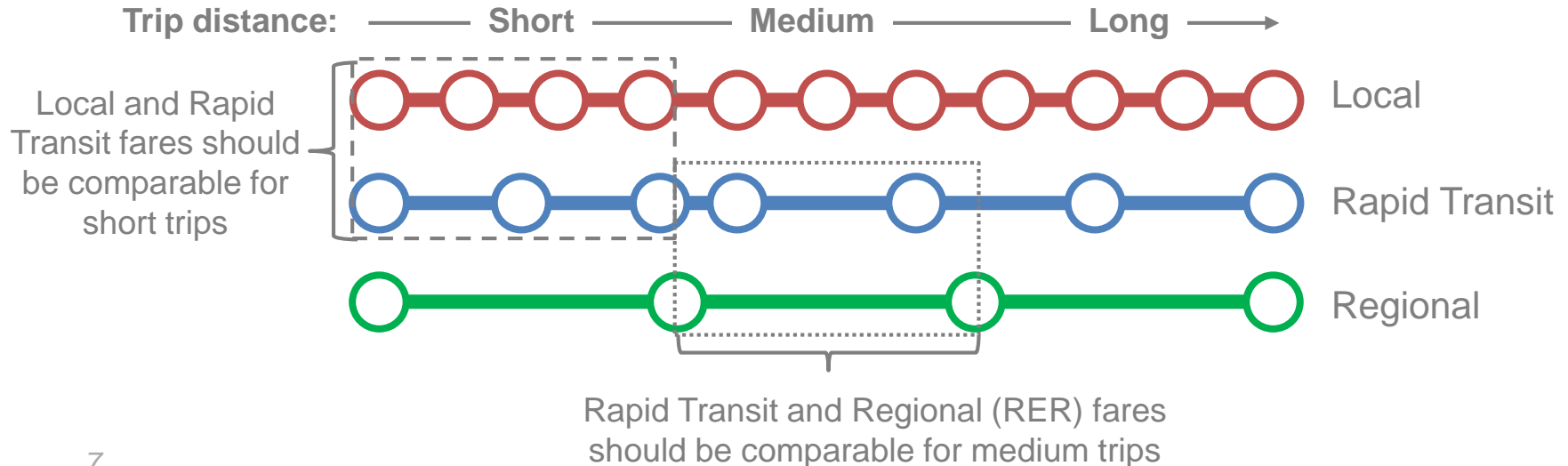


Markets

- 1. Short distance, served by**
 - Local and Rapid Transit
- 2. Medium distance, served by**
 - Rapid Transit, often with Local feeder
 - Local when Rapid Transit is not available
 - Regional (Future RER/SmartTrack)
- 3. Long distance served by**
 - Regional (Future RER/SmartTrack)

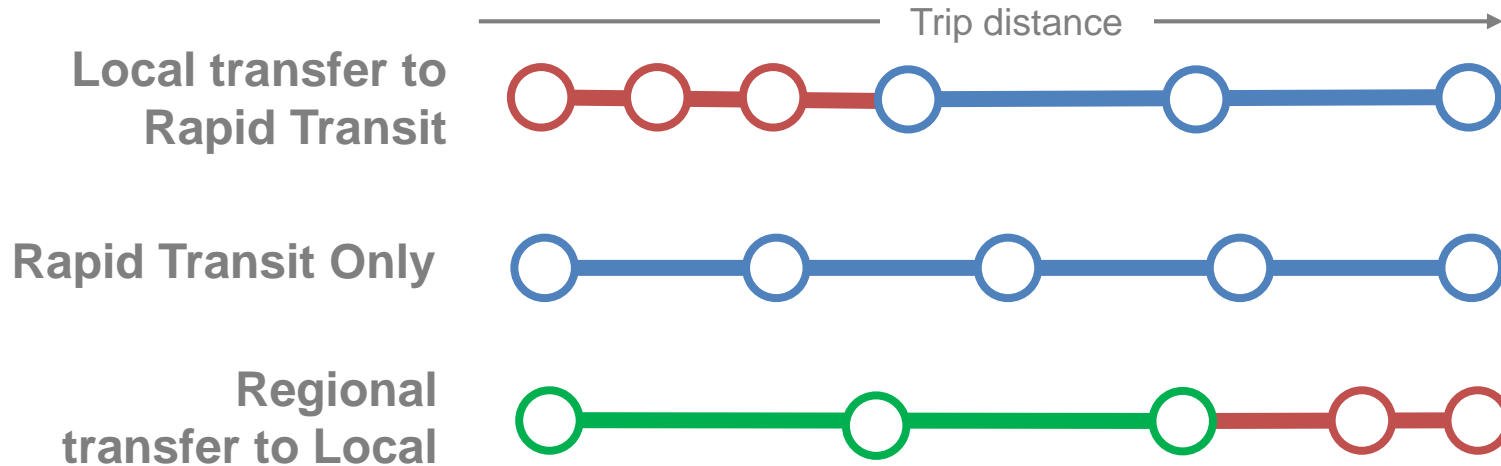
Principle: Continuity

- Customers may use different service types for the same length trips due to service availability
- For customer convenience and efficient use of the available network, fares for different service types should be comparable when the services serve the same market



Principle: Connected Network

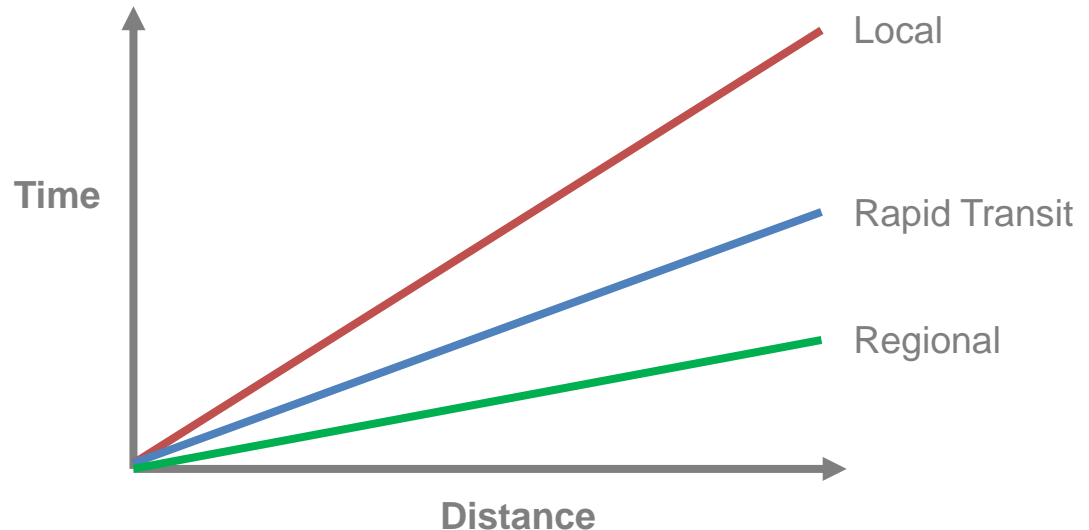
- The GTHA transit network design often requires customers to use multiple service types to complete trips
- To provide integrated use of the network, fares should not penalise trips that require the use of multiple service types



Principle: Generalized Cost

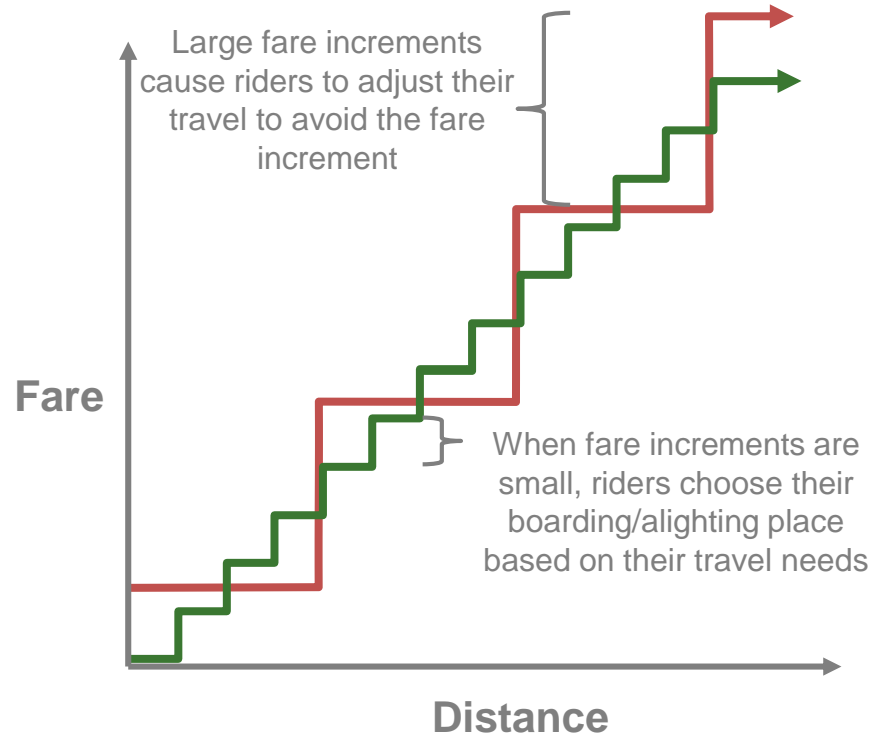
- Service types travel at different speeds and take different times to travel the same distance
- Passengers travelling on slower service modes 'pay' more in time than on faster service modes
- Where there is a significant difference in travel time, fares should be lower for slower service types than for faster service types

Example: Bloor to Sheppard is 19 minutes by subway and 40 minutes by bus



Principle: Gradual Increments

- Large jumps in fare encourage customers to reroute their travel to obtain the lower fare
- To encourage customers to use the service that best meets their travel needs, fares that vary by distance should escalate consistently or in small increments and avoid large jumps



Principle: Large/Small Zones

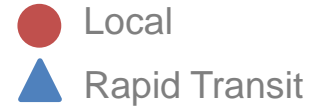
Large zones

- Typically designed with most short trips 1 or 2 zones long
- Customers generally know their fares in advance without needing to consult a map or table
- Can be implemented on Local Transit with on-board fare payment and enforcement

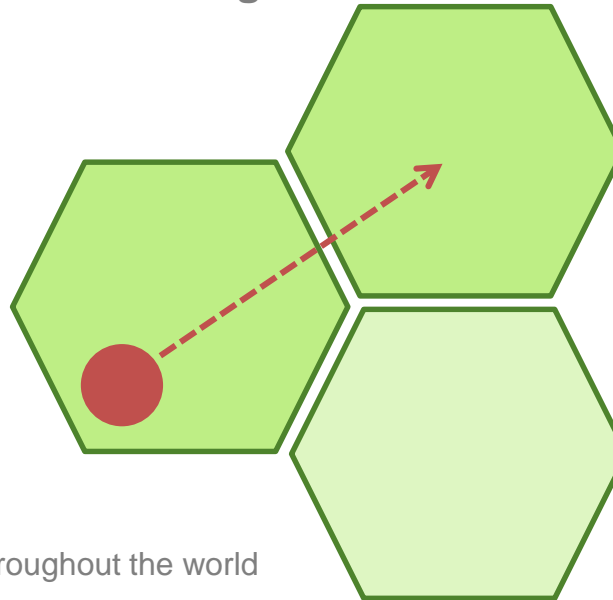
Small zones

- Usually require tap on/off fare collection to determine trip length
- More suitable for Rapid Transit and Regional Transit

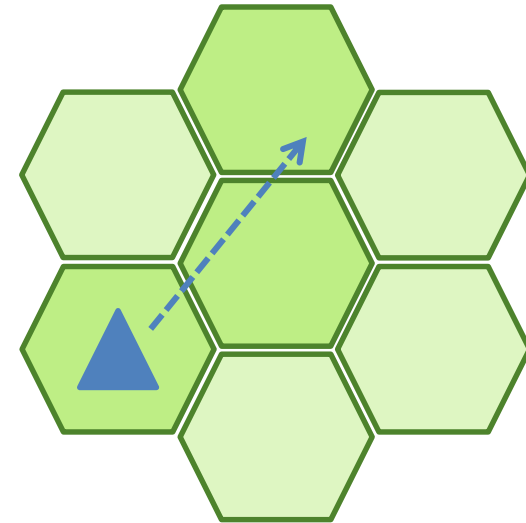
Both large and small zones are widely used throughout the world



Large zones : ~7km



Small zones: ~3km






Fare by Distance Approaches

Local

Rapid Transit

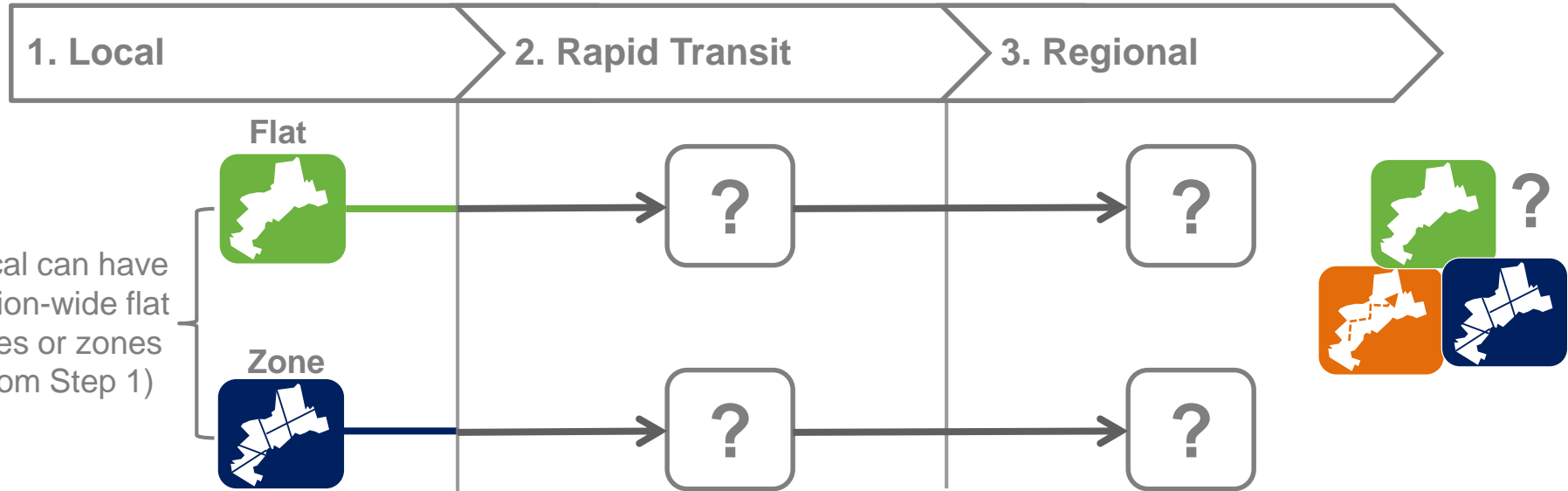
Regional

- Fares may vary by distance differently for each service type
- Three overall fare by distance approaches have been considered:

	Fare by distance type	Description	Applicable Service Types
	Region-Wide Flat Fare	<ul style="list-style-type: none">• A single flat fare is used for all Local• Transfers may be directional and/or time based (example: 2 hour transfer window for all Local services)	Local
	Geographic Zones	<ul style="list-style-type: none">• Zones are drawn across the GTHA• Fare increases based on number of zones passed through	Local Rapid Transit Regional
	Measured Distance	<ul style="list-style-type: none">• Fares are set based on distance travelled• Communicate to customers as 'station to station' fare	Rapid Transit Regional Transit

Fare Structure Design Logic

- Fare structures selected for each service type must work logically together
- Fare structure concepts were built by Service Type, beginning with Local as it has the most trips



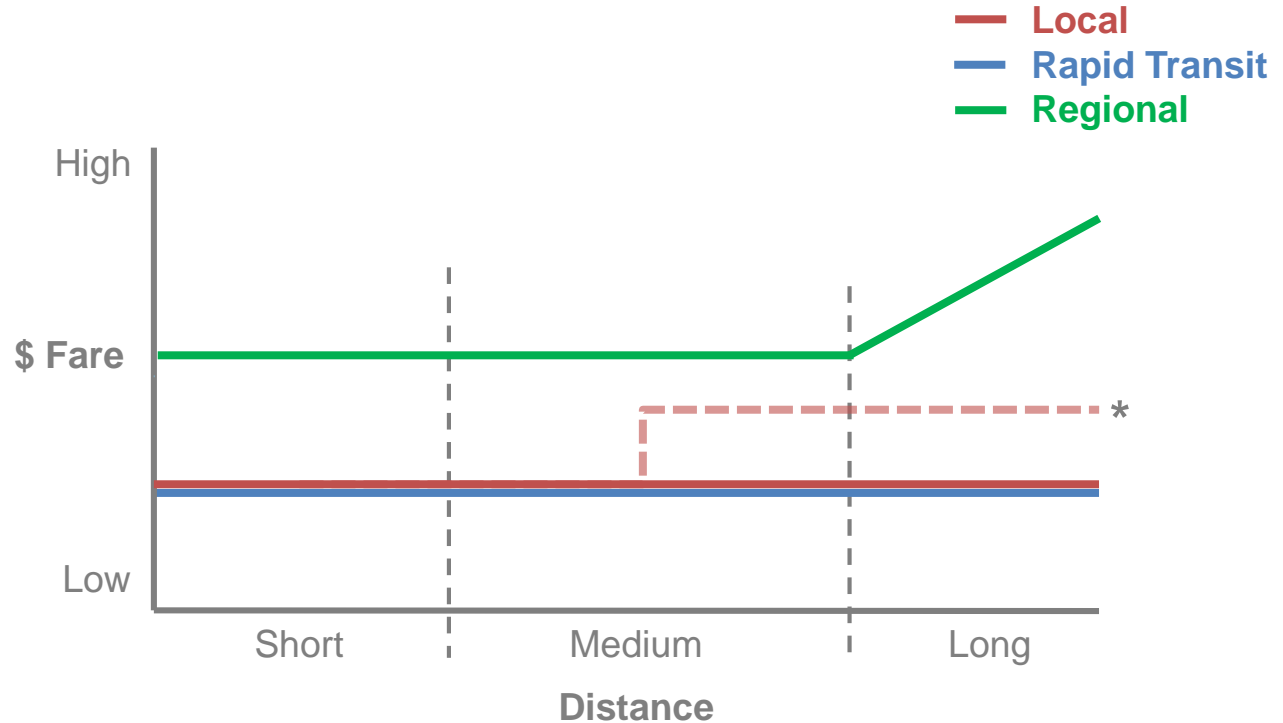
Existing Fare Structure: 'Status Quo'

Local: each Municipal Service Provider sets their own fares; mostly flat with zones for some long trips*

Rapid Transit: same as Local

Regional: small zones, with a flat fare for short to medium length trips

Transfers: free between 905 operators, double fare between 905 and Toronto*, co-fare between 905 and GO, double fare between Toronto and GO*



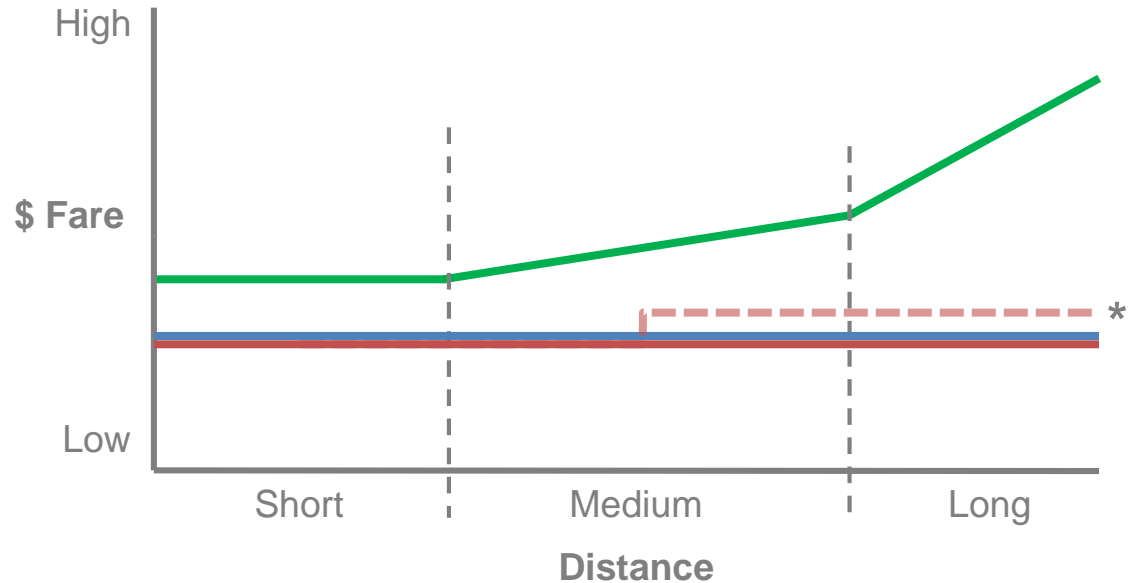
Concept 1: Modified Status Quo

Design Rationale: modify current fare environment to address the most significant issues with the status quo.

— Local
— Rapid Transit
— Regional

Features

- Consistent transfer policy between municipal transit agencies (may require additional fare*)
- Consistent transfer policy between municipal transit and GO
- Regional base fare and Rapid Transit fares more closely aligned to improve continuity for medium length trips



Examples: Modified Status Quo

Local → Local

Jane used to take MiWay from her home and pay a second fare when she transferred to TTC to get to school. Now she pays a discounted transfer fare when she enters the TTC.

Rapid
Transit Regional



Joe used to take the subway to his job downtown even though the GO station is nearby and the GO Train is faster. Now GO fares are closer to subway fares for the same trip, and Joe uses GO when it meets his travel needs.

Local → Regional

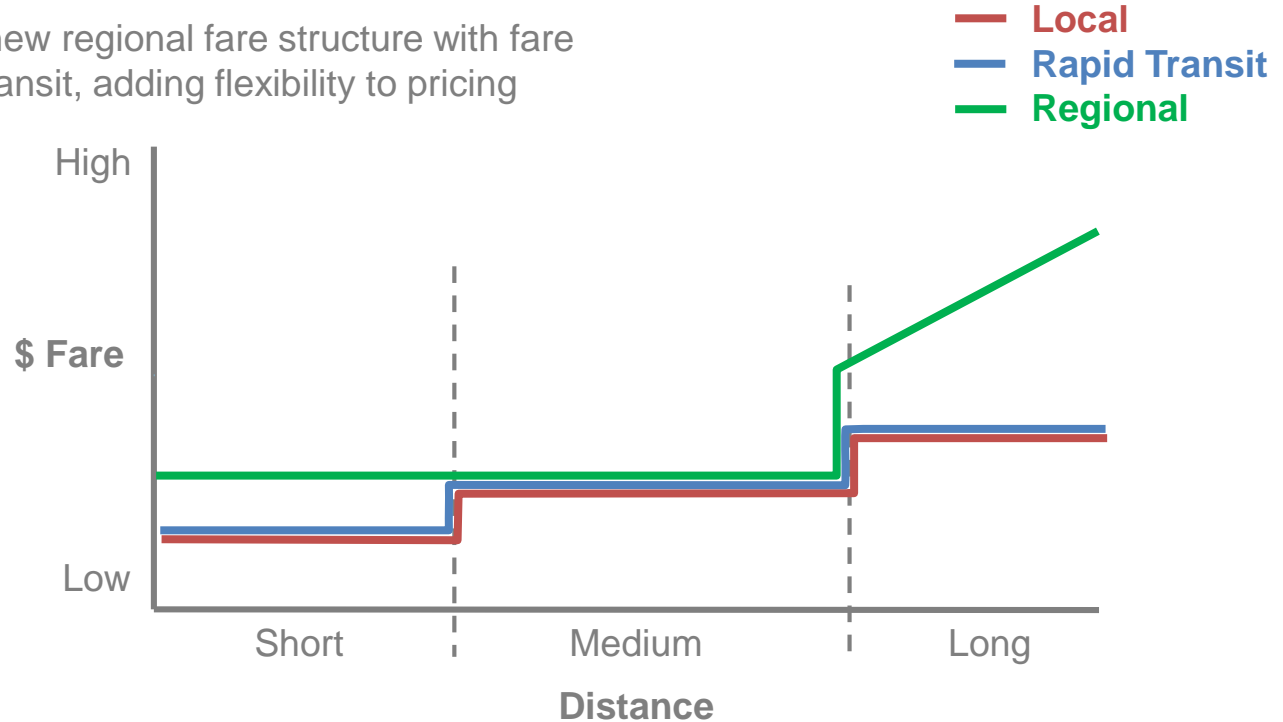
Mary used to drive her car to the GO Train at Agincourt when she went downtown. Now she uses the TTC to get to the GO Station and receives a co-fare transfer discount when she taps on the GO.

Concept 2: Local and Rapid Transit Zones

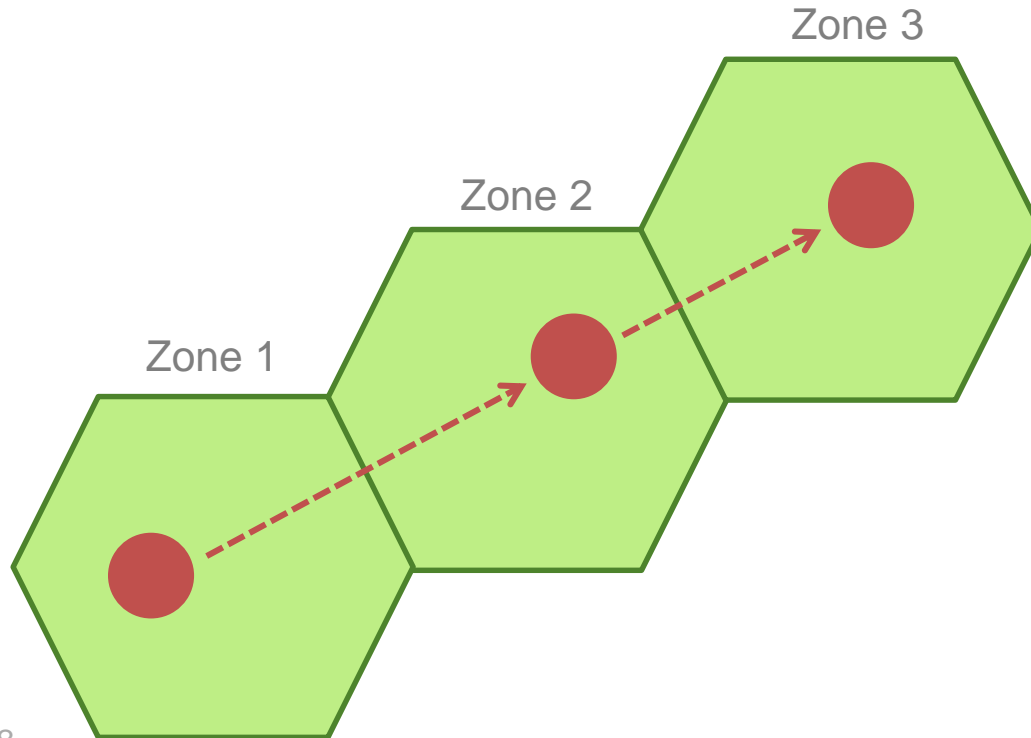
Design Rationale: develop a new regional fare structure with fare by zone for Local and Rapid Transit, adding flexibility to pricing

Features

- Local and Rapid Transit use large zones, aligned for simplicity, but may have different fares
- Regional fares for medium distance trips are comparable to Rapid Transit
- Transfer policy required for transfers between service types



Example: Local and Rapid Transit Zones



Emma takes Durham Region Transit from her home in Ajax and transfers onto the TTC to visit her daughter. She used to pay a second fare when she boarded the TTC bus. Now she pays the fare for 3 zones when she starts her trip.

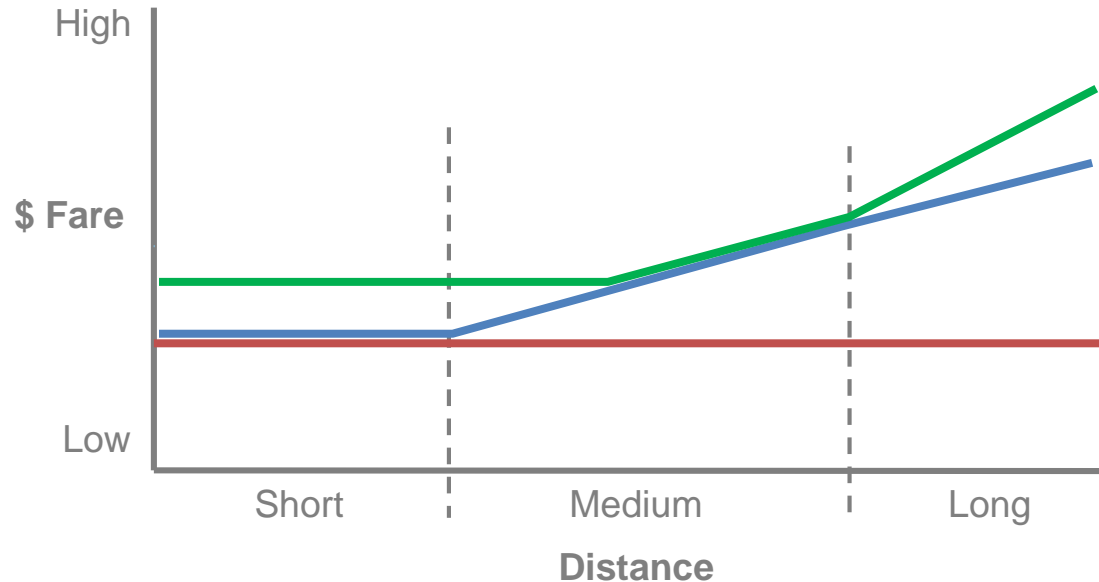
Concept 3: Hybrid

Design Rationale: develop a new fare structure with region-wide flat fare for Local with Rapid Transit and Regional using small zones or fare by distance

Features

- Region-wide flat Local fare
- Rapid Transit comparable to Local for short trips
- Regional fares comparable to Rapid Transit for medium distance trips
- Transfer policy required for transfers between service types

— Local
— Rapid Transit
— Regional



Example: Hybrid



Amir takes York Region Transit from his home and transfers to the TTC subway to get to his appointments. He used to pay a second fare when he boarded the TTC. Now, he pays the flat fare when boarding the bus, and taps on and off when he boards and leaves the subway. Because his trip on the subway is longer than a certain threshold, when he taps off an additional fare reflecting this distance is deducted from his PRESTO card.



Chris uses several municipal buses from her home in Oakville to reach a client in northwest Toronto. She used to pay a second fare when she boarded the TTC bus. Now, she pays a single flat fare for the entire trip when she boards the first bus.

Evaluation Framework

Simplicity

- ✓ Travellers perceive one GTHA transit network, multiple agencies
- ✓ Easy to understand
- ✓ Suitable for different trip and traveller types
- ✓ Adaptable to changes in service, operations, and infrastructure
- ✓ Practical to implement, manage and revise over its lifecycle
- ✓ User friendly point of purchase experience

Value

- ✓ Reflects value of service received
- ✓ Supports transit ridership growth
- ✓ Promotes social equity
- ✓ Provides value for money on transit investments and costs
- ✓ Generates revenue in support of cost recovery plans
- ✓ Minimizes fare underpayment
- ✓ Supports economic growth and environmental sustainability

Consistency

- ✓ Offers common fare concessions and products
- ✓ Provides easy fare payment for trips involving multiple services or modes
- ✓ Allows service providers to adapt to meet changing customer needs
- ✓ Distributes demand efficiently throughout the network
- ✓ Facilitates standardized fare management

Stakeholder Engagement

- A fare integration stakeholder engagement plan will include a range of activities intended to inform, consult, involve and collaborate with municipal partners, elected officials, community groups and the general public

February – March 2016

- Municipal Partner Meetings
- Regional Open Houses
- Digital Engagement



April 2016

- Community Groups
- Public Meetings
- Digital Engagement

Next steps

January-April 2016: Consultation on concepts as input to evaluation

January-May 2016: Concept Analysis and Evaluation

- Refinement of concepts (Impacts of different zone sizes, transfer policies, pricing structures)
- Evaluation of concepts using objective-driven framework

June 2016: Report findings and preferred fare structure

Summer/Fall 2016: Assess additional fare structure elements and implementation considerations



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APPENDICES

Recap: A Customer-First Vision

Vision Statement

- The *GTHA Regional Fare Integration Strategy* will increase customer mobility and transit ridership while maintaining the financial sustainability of GTHA's transit services
- This strategy will remove barriers and enable transit to be perceived and experienced as one network composed of multiple systems/service providers

Goal 1: Simplicity

- The fare strategy will simplify customer experience and agency fare management/operations, attracting travellers to transit services throughout the GTHA

Goal 2: Value

- The fare strategy will reflect the value of the trip taken, and maintain the financial sustainability of transit services

Goal 3: Consistency

- The fare strategy will create a common fare structure with consistent definitions and rules across the GTHA

Recap: Elements of Fare Integration

The elements of fare integration contribute to an easy fare payment experience.

Element	What it is	Customer Expectation
Payment System	System for fare collection: Farecard, mobile device, credit card, etc	One method to pay anywhere Consistent fare structure for multi-agency travel
Fare Structure	System for determining base fares (e.g.. flat fare, by zone, by distance) and related transfer policies	Consistent fare structure throughout region Fares that are seen to reflect the value (length, quality) of trip taken
Concessions	Customer types, e.g., child, youth, senior eligible for fare discounts	Consistent concession definitions throughout region
Products	Fare products to reflect customer travel and volume of use (ticket, pass, volume discount)	Products encourage multi-agency travel where appropriate and reward frequent transit use.
Price	Amount paid for travel, with fares for products and concessions typically derived from the adult cash fare	Consistent price for similar trips throughout region

Fare Strategy Objectives (1/3): Customer Perspective

The fare strategy objectives, developed with the municipal transit service providers, reflect customer, service provider and regional policy perspectives, and provide the basis for evaluating the fare structure alternatives

Category	Label	Objective
Simplicity	C1	Enables travellers to perceive the GTHA's various transit options as one network
	C2	Delivers a fare structure that is readily understood by customers
	C3	Convenient and suitable for different trip and traveller types
Value	C4	Creates fares that travellers perceive as reflecting the value for service received
	C5	Promotes equity by fair pricing of trips
	C6	Provides the customer a user friendly point of purchase experience
Consistency	C7	Allows for common fare concessions and products that meet a range of traveller needs
	C8	Creates standardized fare payment and transaction experience for travellers using one fare medium
	C9	Provides easy fare payment for trips involving multiple services and/or services

Fare Strategy Objectives (2/3): Service Provider Perspective

Category	Label	Objective
Simplicity	S1	Adaptable to changes in agency service provision, operations, and infrastructure
	S2	Has manageable requirements for implementing, maintaining and revising/enhancing the fare strategy over its lifecycle
	S3	Allows for use of fare data for monitoring and service planning
Value	S4	Supports competitive services, ridership development, and service development and promotion policies/preferences/guidelines
	S5	Provides value for money on investment in fare infrastructure/assets and related operating costs.
	S6	Generates revenue required to meet cost recovery plans and minimizes fare underpayment and avoidance
Consistency	S7	Allows service providers to adapt to meet changing customer needs
	S8	Enables seamless transfer between agencies through the implementation and use of common fare media
	S9	Distributes demand efficiently throughout the network and supports the roles of differing service types

Fare Strategy Objectives (3/3): GTHA Mobility and Development Perspective

Category	Label	Objective
Simplicity	G1	Provides a flexible fare system that is practical to implement
	G2	Supports transit planning and management across the GTHA including integrated transit services and data collection
	G3	Creates a readily understandable fare system
Value	G4	Supports transit ridership development within services and across the GTHA
	G5	Generates revenue in support of cost recovery plans across the GTHA.
	G6	Supports strategic policy for the GTHA, including economic growth, built form, social inclusion, and environmental sustainability
Consistency	G7	Supports consistent fare media and products across the GTHA
	G8	Implements a common approach to fare management that enables regional planning/investment
	G9	Supports future service developments

Evaluation Tools

- To assess all concepts against the 27 objectives, four analysis approaches will be applied
- These four tools will be used to generate evidence for all 27 objectives included in the business case framework (strategic, financial, economic, deliverability)

Analysis Approach	Description
Barrier Analysis	Assessment of how the structure removes fare barriers (cost, complexity, captivity) including assessment of changes to fares for each market/sub market, representative origins and destinations, and trip lengths
Customer/ Structure Interaction	Assess how customers interact with the structure at various stages of different trip types.
Modelling	Use of ridership response model to estimate for the region and market: <ul style="list-style-type: none">• Change in ridership and demand distribution throughout network• Change in revenue• Change in Vehicle Kilometers Traveled (VKT)• Equity assessment
Implementation, Maintenance, and Adaptability	Assessment of implementation impacts including fare collection requirements (tap on/tap off, enforcement), costs (capital/op/life cycle costs) and benefits (data and planning)



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